

1. A method for controlling access by a user terminal to a communications network, comprising the steps of:

receiving from the user terminal a request to access the communications network;  
transmitting to the user terminal an identity request message;

5 receiving from the user terminal, if the user terminal utilizes a predetermined authentication protocol, a response to the identity request message;  
determining whether the user terminal uses the predetermined authentication protocol in response to the response to the identity request message; and  
selecting an authentication mechanism, compatible with the user terminal in response  
10 to the determination, for allowing user terminal access to the communications.

2. The method according to claim 1, wherein the user terminal comprises a mobile terminal and the communications network comprises a wireless local area network WLAN that complies with the IEEE 802.11 standards.

3. The method according to claim 2, wherein the selecting step includes selecting an appropriate authentication server coupled to the WLAN in response to the determination.

4. A method for controlling mobile terminal access to a wireless local area network (WLAN), comprising the steps of:  
receiving from the mobile terminal a request to access the WLAN;  
transmitting to the mobile terminal an identity request message;  
receiving from the mobile terminal, if the mobile terminal utilizes an IEEE 802.1x  
20 protocol, a response to the identity request message;  
determining whether the mobile terminal is IEEE 802.1x compliant in response to the  
25 response to the identity request message; and  
selecting an authentication mechanism, compatible with the mobile terminal in response to the determination, for allowing mobile terminal access to the WLAN.

5. The method according to claim 4, further comprising the steps of, if the mobile terminal is IEEE 802.1x compliant, transmitting an authentication request to an authentication server and receiving an authentication response utilizing the IEEE 802.1x protocol, and controlling mobile terminal access to the WLAN in response to the authentication response.

6. The method according to claim 4, further comprising the steps of, if the mobile terminal is not IEEE 802.1x compliant, redirecting an authentication request to an HTTP server for utilizing a browser based authentication.

5

7. The method according to claim 6, further comprising the step of configuring a packet filtering module to redirect the authentication request to the HTTP server.

8. The method according to claim 7, further comprising the step of maintaining state information in the WLAN for use by the packet filtering module and the HTTP server.

10

9. The method according to claim 8, wherein the state information includes one of a first state indicative of ongoing authentication process, a second state indicative of authentication failure, a third state indicative of authentication success, and a fourth state indicative of a non IEEE 802.1x mobile terminal.

15

10. An access point in communication with a terminal device in a wireless local area network, comprising:

a means to determine whether the terminal device utilizes an IEEE 802.1x protocol and, if the terminal does not utilize said protocol, then the access point employing an authentication means compatible with the terminal device otherwise the access point employing an IEEE 802.1x protocol.

20

11. The access point in claim 10, wherein the means to determine includes communicating to the terminal device a Request-Identity EAP packet and if the mobile terminal utilizes the IEEE 802.1x protocol the access receives a Response-Identity EAP packet.

25

12. The access point in claim 11, further comprises the means to configure an IP packet filtering to redirect the device HTTP request to a local server if the terminal device does not utilize said protocol.

30

13. The access point in claim 10, further comprises means to communicate IEEE 802.1x protocol exchanges and means to establish IP packet filtering through an IP filter module and

state information for the HTTP server to control the terminal device access during and after IEEE 802.1x based authentication process if the access point detects that the terminal device is an IEEE 802.1x client.

- 5     14.     A method for controlling access by a terminal device in a wireless local area network by determining whether the terminal device utilizes an IEEE 802.1x protocol comprising the steps of:
- an access point communicating to the mobile terminal a request to identify, and if the terminal device utilizes an IEEE 802.1x protocol, acknowledging the request to identify,  
10     otherwise the access point determining that the terminal is not IEEE 802.1x compliant and selecting an authentication mechanism compatible with the mobile terminal.
- 15     15.     The method according to claim 14, wherein the access point determines that the terminal is not IEEE 802.1x compliant when it does not receive an EAP identity response packet after a timeout value.
- 20     16.     The method according to claim 15, further comprising the step of access point detecting that if the terminal device is not IEEE 802.1x compliant, then configuring an IP packet filter and redirecting a user HTTP request to a local server.
- 25     17.     The method according to claim 16, further comprising the step of the local server communicating to the terminal device information specifically related to a browser based authentication.
- 30     18.     The method according to claim 17, further comprising the step of the access point transitioning to a state if the terminal device utilizes the IEEE 802.1x protocol that indicates that the terminal device is IEEE 802.1x compliant and thereafter processing all communication utilizing the IEEE 802.1x protocol.
19.     The method according to claim 17, further comprising the step of the access point transitioning to a state corresponding to browser based authentication if the authentication process fails.

20. The method according to claim 14, further comprising the step of the access point transitioning to a state corresponding to browser based authentication if the terminal device is not IEEE 802.1x compliant.

5 21. A method for controlling access of a terminal device in a WLAN by determining whether the terminal device utilizes an IEEE 802.1x protocol comprising the steps of: communicating through the an access point to the mobile terminal a request to identify, and if the terminal device utilizes an IEEE 802.1x protocol, acknowledging the request to identify, otherwise determining by the access point that the terminal is not IEEE 802.1x compliant and  
10 selecting an authentication mechanism compatible with the terminal.

22. The method according to claim 21, further comprising the step of determining in the access point that terminal is not IEEE 802.1x compliant if it does not receive an EAP identity response packet after a preset time.

15 23. The method according to claim 21, further comprising the step of detecting in the access point that if the terminal device is not IEEE 802.1x compliant, then configuring an IP packet filter and redirecting a user HTTP request to a local server.

20 24. The method according to claim 23, further comprising the step of communicating from the local server to the terminal device, information specifically related to a browser based authentication.

25 25. The method according to claim 21, further comprising the step of transitioning to a state in the access point if the terminal device utilizes the IEEE 802.1x protocol that indicates that the terminal device is IEEE 802.1x compliant and thereafter processing all communication utilizing the IEEE 802.1x protocol.

30 26. The method according to claim 25, further comprising the step of transitioning to a state in the access point corresponding to browser based authentication if the authentication process fails.

27. The method according to claim 21, further comprising the step of transitioning to a state in the access point corresponding to browser based authentication if the terminal device is not IEEE 802.1x compliant.